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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/057,189	01/25/2002	Zoltan Biacs	020101	5303

23696 7590 03/09/2005

Qualcomm Incorporated
Patents Department
5775 Morehouse Drive
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EXAMINER	
PANNALA, SATHYANARAYA R	
ART UNIT	**PAPER NUMBER**
2167	

DATE MAILED: 03/09/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No.	Applicant(s)	
	10/057,189	BIACS, ZOLTAN	
	Examiner	**Art Unit**	
	Sathyanarayan Pannala	2167	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

1)☒ Responsive to communication(s) filed on *25 January 2002*.

2a)☐ This action is **FINAL**. 2b)☒ This action is non-final.

3)☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

4)☒ Claim(s) *1-3,6-21,24-39 and 42-59* is/are pending in the application.

4a) Of the above claim(s) _____ is/are withdrawn from consideration.

5)☐ Claim(s) _____ is/are allowed.

6)☒ Claim(s) *1-3,6-21,24-39 and 42-59* is/are rejected.

7)☒ Claim(s) *4-5,22-23,40-41* is/are objected to.

8)☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

9)☒ The specification is objected to by the Examiner.

10)☐ The drawing(s) filed on _____ is/are: a)☐ accepted or b)☐ objected to by the Examiner.

Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).

Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).

11)☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

12)☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).

a)☐ All b)☐ Some * c)☐ None of:

1.☐ Certified copies of the priority documents have been received.

2.☐ Certified copies of the priority documents have been received in Application No. _____.

3.☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

1) ☒ Notice of References Cited (PTO-892)

2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)

3) ☐ Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) Paper No(s)/Mail Date _____.

4) ☐ Interview Summary (PTO-413) Paper No(s)/Mail Date. _____ .

5) ☐ Notice of Informal Patent Application (PTO-152)

6) ☐ Other: _____.

DETAILED ACTION

1. The Application 10/057189 filed on 1/25/2002 has been examined. Claims 1-59 are pending in this Office Action.

Specification

2. The abstract is objected because the abstract is a copy of the summary paragraphs 2 and 3. Corrected abstract of the disclosure is required and must be presented on a separate sheet, apart from any other text. Applicant is reminded of the proper content of an abstract of the disclosure.

A patent abstract is a concise statement of the technical disclosure of the patent and should include that which is new in the art to which the invention pertains. If the patent is of a basic nature, the entire technical disclosure may be new in the art, and the abstract should be directed to the entire disclosure. If the patent is in the nature of an improvement in an old apparatus, process, product, or composition, the abstract should include the technical disclosure of the improvement. In certain patents, particularly those for compounds and compositions, wherein the process for making and/or the use thereof are not obvious, the abstract should set forth a process for making and/or use thereof. If the new technical disclosure involves modifications or alternatives, the abstract should mention by way of example the preferred modification or alternative.

The abstract should not refer to purported merits or speculative applications of the invention and should not compare the invention with the prior art.

Claim Rejections - 35 USC § 102

3. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

> A person shall be entitled to a patent unless –
>
> (e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

4. Claims 1-2, 6, 11-13, 19-20, 24, 29-31 and 55-57 are rejected under 35 U.S.C. 102(e) as being anticipated by Lancaster et al. (US Patent 6,229,546) hereinafter Lancaster.

5. As per independent claims 1, 19 and 37, Lancaster teaches a method optimized for personal computers for terrain model generation where the simulated land surface is colored and texture based on geographic databases where natural and manmade 3-D object features can populate the surface. The method includes the steps of acquiring input data from at least one of a plurality of digital data sources reading the data,

translating the data format and transforming into one or more intermediate database formats (col. 1, line 65 to col. 2, line 10). Lancaster teaches the claimed step of "locating a first compressed portion of a Digital Elevation Model (DEM) using a first index, the Digital Elevation Model comprising a plurality of compressed portions which includes the first compressed portion, the first index pointing to a storage location where the first compressed portion is stored" as a modem download via the Internet is to access data source (Fig. 2, col. 5, lines 52-53 and col. 6, lines 18-19) and The index of the intermediate database is read into variable arrays (Fig. 3, col. 7, lines 39-40). Further, Lancaster teaches the claimed step of "decompressing the first compressed portion to retrieve first elevation data for at least one sample point in the Digital Elevation Model" as the user selects the geographic extents for the desired output file at step 210 of the query process and uncompressed using standard means at step 150 (Fig. 3, col. 7, lines 41-47).

6. As per dependent claims 2, 20 and 38, Lancaster teaches the claimed step of "the plurality of compressed portions are stored in one of: a) a Memory Mapped File (MMF); b) Random Access Memory (RAM); and c) a file in a file system on a digital processing system" as the file is stored to the local hard disk or to removable storage media as the user chooses (Fig. 1, col. 4, lines 65-67).

7. As per dependent claims 6, 24 and 42, Lancaster teaches the claimed step of "decompressing the first compressed portion comprises: run length decoding the first

elevation data to generate normalized elevation data and adding a reference elevation to the normalized elevation data to generate the first elevation data" as each digital elevation model file is uncompressed, as depicted in block 70. For certain digital elevation data files, such as the 3-arc second USGS DEM files utilized in one of the preferred embodiments, the DEM file is modified by adding record delimiters, depicted as step 75 (Fig. 2, col. 5, lines 61-66).

8. As per independent claims 11, 29 and 47, Lancaster teaches a method optimized for personal computers for terrain model generation where the simulated land surface is colored and texture based on geographic databases where natural and manmade 3-D object features can populate the surface. The method includes the steps of acquiring input data from at least one of a plurality of digital data sources reading the data, translating the data format and transforming into one or more intermediate database formats (col. 1, line 65 to col. 2, line 10). Lancaster teaches the claimed step of "compressing elevation data of a first portion of a Digital Elevation Model (DEM) to generate first compressed elevation data, storing the first compressed elevation data in a storage location pointed to by a first index and storing the first index" as a modem download via the Internet is to access data source (Fig. 2, col. 5, lines 52-53 and col. 6, lines 18-19) and The index of the intermediate database is read into variable arrays (Fig. 3, col. 7, lines 39-40).

9. As per dependent claims 12, 30 and 48, Lancaster teaches the claimed step of "storing parameters required for determining whether or not a location is in the first portion of the Digital Elevation Model" as the log file that stores the custom characteristics (parameters) chosen by the user (col. 3, lines 53-55).

10. As per dependent claims 13, 31 and 49, Lancaster teaches the claimed step of "storing data specifying a coordinate system used to represent the elevation data of the first portion of the Digital Elevation Model" as 3-Dmodel file is stored to the local hard disk (col. 3, lines 55-59).

11. As per independent claim 55, Lancaster teaches a method optimized for personal computers for terrain model generation where the simulated land surface is colored and texture based on geographic databases where natural and manmade 3-D object features can populate the surface. The method includes the steps of acquiring input data from at least one of a plurality of digital data sources reading the data, translating the data format and transforming into one or more intermediate database formats (col. 1, line 65 to col. 2, line 10). Lancaster teaches the claimed step of "compressing elevation data of a first portion of a Digital Elevation Model (DEM) to generate first compressed elevation data, storing the first compressed elevation data in a storage location pointed to by a first index as part of the data stream and storing the first index as part of the data stream" as a modem download via the Internet is to access data

source (Fig. 2, col. 5, lines 52-53 and col. 6, lines 18-19) and The index of the intermediate database is read into variable arrays (Fig. 3, col. 7, lines 39-40).

12. As per dependent claim 56, Lancaster teaches the claimed "storing parameters required for determining whether or not a location is in the first portion of the Digital Elevation Model as part of the data stream" as the log file that stores the custom characteristics (parameters) chosen by the user (col. 3, lines 53-55).

13. As per dependent claim 57, Lancaster teaches the claimed "storing data specifying a coordinate system used to represent the elevation data of the first portion of the Digital Elevation Model as part of the data stream" as 3-Dmodel file is stored to the local hard disk (col. 3, lines 55-59).

Claim Rejections - 35 USC § 103

14. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

> (a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negatived by the manner in which the invention was made.

15. Claims 3, 7-10, 21, 25-28, 29, 43-46, 14-18, 32-36, 50-54 and 58-59 are rejected under 35 U.S.C. 103(a) as being unpatentable over Lancaster et al. (US Patent 6,229,546) hereinafter Lancaster, and in view of Knopp (US Patent 6,757,445) hereinafter Knapp.

16. As per dependent claims 3, 21 and 39, Lancaster does not teach tile of the digital elevation model. However, Knopp do teach the claimed step of "the plurality of compressed portions are portions of compressed profiles in a first tile of the Digital Elevation Model" as folder images contain preprocessed tile tiff images (Fig. 6, col. 13, lines 53-56). Thus it would have been obvious to one of ordinary skill in the data processing art at the time of the invention, to have combined the teachings of the cited references because Knopp's teachings would have allowed Lancaster's method to do Orthorectification and mosaicking, which will save lot of time in comparison to traditional processing of a custom digital orthophoto. Orthorectification is carried out on the digital imagery on a frame (examiner considered as tile) by frame basis and orthorectified images are then combined into a single composite image during a mosaicking step (see Knopp, col. 1, lines 44-52).

17. As per dependent claims 7, 25 and 43, Lancaster does not teach tile of the digital elevation model. However, Knopp do teach the claimed step of "identifying a plurality of sample points in the vicinity of a first location" as the digital imagery data or pixel data are processed to select or pick points which identify corresponding features in

overlapping frames (Fig. 1, col. 9, lines 40-42). Further, Knopp teaches the claimed step of "retrieving elevations of the plurality of sample points from the Digital Elevation Model" as one dimension vertical information from the DEM (Fig. 1, col. 11, lines 22-26). Further, Knopp teaches the claimed step of "computing an elevation of the first location from an interpolation using the elevations of the plurality of sample points" as the results of the final calculation (Fig. 1, col. 11, lines 48-53). Thus it would have been obvious to one of ordinary skill in the data processing art at the time of the invention, to combine the teachings of the cited references because Knopp's teachings would have allowed Lancaster's method to do Orthorectification and mosaicking which will save lot of time in comparison to traditional processing of a custom digital orthophoto. Orthorectification is carried out on the digital imagery on a frame (examiner considered as tile) by frame basis and orthorectified images are then combined into a single composite image during a mosaicking step (see Knopp, col. 1, lines 44-52).

18. As per dependent claims 8, 26 and 44, Lancaster teaches the claimed step of "performing a coordinate transformation to express a horizontal position of the first location in a coordinate system used by the Digital Elevation Model" as the query interface enables a particular geographical region to be the basis for the 3-D world model (col. 3, lines 40-45).

19. As per dependent claims 9, 27 and 45, Lancaster teaches the claimed step of "providing the elevation of the first location to a Position Determination Entity to perform

altitude aiding in a positioning system" as the query interface enables a particular geographical region to be the basis for the 3-D world model (col. 3, lines 40-45).

20. As per dependent claims 10, 28 and 46, Lancaster teaches the claimed step of "computing the elevation of the first location comprises: performing a coordinate transformation such that the elevation of first location is expressed in a coordinate system used by the Position Determination Entity" as the query interface enables a particular geographical region to be the basis for the 3-D world model (col. 3, lines 40-45).

21. As per dependent claims 14, 32 and 50, Lancaster does not teach tile of the digital elevation model. However, Knopp do teach the claimed step of "compressing the elevation data of the first portion comprises: subtracting a reference elevation from the elevation data of the first portion of the Digital Elevation Model (DEM) to generate normalized elevation data and scaling the normalized elevation data to generate scaled elevation data" (Fig. 27, col. 28, lines 56-67). Thus it would have been obvious to one of ordinary skill in the data processing art at the time of the invention, to combine the teachings of the cited references because Knopp's teachings would have allowed Lancaster's method to do Orthorectification and mosaicking which will save lot of time in comparison to traditional processing of a custom digital orthophoto. Orthorectification is carried out on the digital imagery on a frame (examiner considered as tile) by frame

basis and orthorectified images are then combined into a single composite image during a mosaicking step (see Knopp, col. 1, lines 44-52).

22. As per dependent claims 15, 33 and 51, Lancaster does not teach tile of the digital elevation model. However, Knopp do teach the claimed step of "compressing the elevation data of the first portion further comprises: run length encoding the scaled elevation data to generate the first compressed elevation data" as the method comprises acquiring digital elevation model data from at least first and second sources (col. 3, lines 3-5). Thus it would have been obvious to one of ordinary skill in the data processing art at the time of the invention, to combine the teachings of the cited references because Knopp's teachings would have allowed Lancaster's method to do Orthorectification and mosaicking which will save lot of time in comparison to traditional processing of a custom digital orthophoto. Orthorectification is carried out on the digital imagery on a frame (examiner considered as tile) by frame basis and orthorectified images are then combined into a single composite image during a mosaicking step (see Knopp, col. 1, lines 44-52).

23. As per dependent claims 16, 34 and 52, Lancaster does not teach tile of the digital elevation model. However, Knopp do teach the claimed step of "the first portion is a profile of the Digital Elevation Model" as the data from the first and second sources (col. 3, lines3-5). Thus it would have been obvious to one of ordinary skill in the data processing art at the time of the invention, to combine the teachings of the cited references because Knopp's teachings would have allowed Lancaster's method to do

Orthorectification and mosaicking which will save lot of time in comparison to traditional processing of a custom digital orthophoto. Orthorectification is carried out on the digital imagery on a frame (examiner considered as tile) by frame basis and orthorectified images are then combined into a single composite image during a mosaicking step (see Knopp, col. 1, lines 44-52).

24. As per dependent claims 17, 35 and 53, Lancaster does not teach tile of the digital elevation model. However, Knopp do teach the claimed step of "dividing an area of the Digital Elevation Model into a plurality of tiles and storing parameters required for determining whether or not a location is in one of the plurality of tiles wherein the first portion is one of a plurality of profiles in one of the plurality of tiles" as other post processing procedures include a partitioning of mosaics into "tiles" or "sheets" which have geometric and/or data file sizes conforming to customer specifications and expectations (Fig. 55-56, col. 45, lines 34-37 and 40-42). Thus it would have been obvious to one of ordinary skill in the data processing art at the time of the invention, to combine the teachings of the cited references because Knopp's teachings would have allowed Lancaster's method to do Orthorectification and mosaicking which will save lot of time in comparison to traditional processing of a custom digital orthophoto. Orthorectification is carried out on the digital imagery on a frame (examiner considered as tile) by frame basis and orthorectified images are then combined into a single composite image during a mosaicking step (see Knopp, col. 1, lines 44-52).

25. As per dependent claims 18, 36 and 54, Lancaster does not teach tile of the digital elevation model. However, Knopp do teach the claimed step of "dividing the Digital Elevation Model into a plurality of areas; and storing parameters required for determining whether or not a location is in one of the plurality of areas" as the data could be formatted in a wide variety (Fig. 55-56, col. 45, lines 43-45). Thus it would have been obvious to one of ordinary skill in the data processing art at the time of the invention, to combine the teachings of the cited references because Knopp's teachings would have allowed Lancaster's method to do Orthorectification and mosaicking which will save lot of time in comparison to traditional processing of a custom digital orthophoto. Orthorectification is carried out on the digital imagery on a frame (examiner considered as tile) by frame basis and orthorectified images are then combined into a single composite image during a mosaicking step (see Knopp, col. 1, lines 44-52).

26. As per dependent claim 58, Lancaster does not teach tile of the digital elevation model. However, Knopp do teach the claimed step of "subtracting a reference elevation from the elevation data of the first portion of the Digital Elevation Model (DEM) to generate normalized elevation data and scaling the normalized elevation data to generate scaled elevation data" (Fig. 27, col. 28, lines 56-67). Thus it would have been obvious to one of ordinary skill in the data processing art at the time of the invention, to combine the teachings of the cited references because Knopp's teachings would have allowed Lancaster's method to do Orthorectification and mosaicking which will save lot of time in comparison to traditional processing of a custom digital orthophoto.

Orthorectification is carried out on the digital imagery on a frame (examiner considered as tile) by frame basis and orthorectified images are then combined into a single composite image during a mosaicking step (see Knopp, col. 1, lines 44-52).

27. As per dependent claim 59, Lancaster does not teach tile of the digital elevation model. However, Knopp do teach the claimed step of “run length encoding the scaled elevation data to generate the first compressed elevation data” as the method comprises acquiring digital elevation model data from at least first and second sources (col. 3, lines 3-5). Thus it would have been obvious to one of ordinary skill in the data processing art at the time of the invention, to combine the teachings of the cited references because Knopp’s teachings would have allowed Lancaster’s method to do Orthorectification and mosaicking which will save lot of time in comparison to traditional processing of a custom digital orthophoto. Orthorectification is carried out on the digital imagery on a frame (examiner considered as tile) by frame basis and orthorectified images are then combined into a single composite image during a mosaicking step (see Knopp, col. 1, lines 44-52).

Allowable Subject Matter

28. Claims 4-5, 22-23 and 40-41 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Sathyanarayan Pannala whose telephone number is (571) 272-4115. The examiner can normally be reached on 8:00 am - 5:00 pm.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, John Breene can be reached on (571) 272-4107. The fax phone number for the organization where this application or proceeding is assigned is 703-872-9306.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see http://pair-direct.uspto.gov. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

SRP
Sathyanarayan Pannala
Examiner
Art Unit 2167

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